-continued

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1. An activin receptor type II (ActRII)-binding antibody comprising a set of CDRs: VH-CDR1, VH-CDR2, VH-CDR3, VL-CDR1, VL-CDR2 and VL-CDR3, wherein

VH-CDR1, VH-CDR2, and VH-CDR3 are CDRs in SEQ ID NO:165, and

VL-CDR1, VL-CDR2, and VL-CDR3 are CDRs in SEQ ID NO:172,

wherein the antibody binds activin receptor type IIB (ActRIIB).

2. (canceled)

3. An ActRII-binding antibody comprising a set of CDRs in which:

(i) VH-CDR1 has the amino acid sequence of SEQ ID NO:166;

(ii) VH-CDR2 has the amino acid sequence of SEQ ID NO:167;

(iii) VH-CDR3 has the amino acid sequence of SEQ ID NO:168;

(iv) VL-CDR1 has the amino acid sequence of SEQ ID NO:173;

(v) VL-CDR2 has the amino acid sequence of SEQ ID NO:174; and

(vi) VL-CDR3 has the amino acid sequence of SEQ ID NO:175;

wherein the antibody binds ActRIIB.

4-8. (canceled)

9. The ActRII-binding antibody of claim **3**, which comprises a VH sequence of SEQ ID NO:165 and a VL sequence of SEQ ID NO:172.

10-15. (canceled)

16. The ActRII-binding antibody of claim **3**, wherein the antibody has at least one characteristic selected from:

(a) competing with activin A, activin B, BMP7, BMP9, BMP10, GDF8 (myostatin), GDF11, or Nodal, for binding to ActRIIB and/or ActRIIA;

(b) decreasing the phosphorylation of one or more Smads in cells expressing ActRIIB and/or ActRIIA in the presence of an ActRIIB or ActRIIA ligand (e.g., activin A);

(c) decreasing the phosphorylation of ALK4 and/or ALK7 in cells expressing ActRIIB and/or ActRIIA and ALK4 and/or ALK7 in the presence of an ActRIIB and/or ActRIIA ligand; and

(d) binding to ActRIIB and/or ActRIIA with a KD of ≤1 nM and ≥1 pM (e.g., as determined by BIACORE® analysis).

17. (canceled)

18. The ActRII-binding antibody of claim **3**, wherein the antibody is a monoclonal antibody, a recombinant antibody, a human antibody, a humanized antibody, a chimeric antibody, a bi-specific antibody, a multi-specific antibody, or an ActRII-binding antibody fragment.

19. The ActRII-binding antibody of claim **18**, wherein the ActRII-binding antibody fragment is selected from a Fab fragment, a Fab' fragment, a F(ab')2 fragment, a Fv fragment, a diabody, or a single chain antibody molecule.

20. The ActRII-binding antibody of claim **3**, wherein the antibody further comprises a heavy chain immunoglobulin constant domain selected from:

(a) a human IgA constant domain;

(b) a human IgD constant domain;

(c) a human IgE constant domain;

(d) a human IgG1 constant domain;

(e) a human IgG2 constant domain;

(f) a human IgG3 constant domain;

(g) a human IgG4 constant domain; and

(h) a human IgM constant domain.

21. The ActRII-binding antibody of claim **3**, wherein the antibody further comprises a light chain immunoglobulin constant domain selected from:

(a) a human Ig kappa constant domain; and

(b) a human Ig lambda constant domain.